

Campus Public Emergency Communications

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Campus Public Emergency Communications (CPEC)

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City of Berkley Police Dept.	Melbourne Florida Fire Dept.	Stillwater Fire Dept.	University of San Francisco
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Thank you to the many organizations that participated in our research. Without your help and support, the CPEC Instructional Development Team at Arizona State University would have been unable to produce our courses on campus public emergency communications.

Campus Public Emergency Communications

- 3700 U.S. colleges and universities
- Campuses will encounter a crisis or disaster
- Public emergency communications shared by multiple stakeholders



There are 3700 colleges and universities in the United States. They are unique in their size, demographics, location and emergency preparation needs. However, it is inevitable that at some point campuses will encounter a crisis or disaster. It is essential to the wellbeing of college and university faculty, staff, students, campus visitors, and neighboring communities that the responsibility for public emergency communications lies with multiple on and off campus stakeholders.

Need for Training

- Since 2000
 - 26 shootings on college and university campuses.
 - Three destructive storms (Ivan, Katrina, Irene)
 - Tornado April 27, 2011
- Higher education needs:
 - NIMS-compliant public emergency communications protocols
 - reliable and redundant emergency communication systems
- Federal mandates
 - HSPD 8
 - National Preparedness Goal
 - Clery Act
 - Higher Ed. Opportunity Act
- A clearinghouse for campus public emergency communications best practices



U.C. Santa Cruz EOC
<http://emerge.ucy.ucsc.edu/>



Since 2000, there have been 26 shootings on college and university campuses. The most infamous being the 2007 Virginia Polytechnic Institute and State University.

Three destructive tropical storms with serious impact on campuses in the southeast (Ivan 2004, Katrina 2005, Irene 2011) Tulane University and Loyola University in New Orleans were forced to evacuate their students and close their campuses.

On April 27, 2011 3-college campuses sustained damage and the University of Alabama ended its spring semester early after massive tornado rampaged Tuscaloosa, Alabama. The need for effective, coordinated, and NIMS-compliant public emergency communications protocols and reliable and redundant emergency communication systems on campus and in local governmental agencies having a jurisdictional role in campus security has never been greater.

There is direction from the federal government for campuses to be prepared stemming from the Homeland Security Presidential Directive 8, Higher Education Opportunity Act and Clery Act.

A clearinghouse does not exist to identify and list best practices related to campus public emergency communications, and campus emergency communications systems backup and disaster recovery procedures.

Problem Statement

- Infrastructure outages
- Mass casualty incidents
- Training and preparation for crisis communications
- Cooperation between campus officials and communicators
- Communications interoperability



Tornado damage at Gustavus Adolphus College, Saint Peter, MN March 29, 1998



After large-scale disasters in U.S. a need for interoperable, functional communications was identified. Our nation has experienced infrastructure outages that were pervasive and prolonged.

During large-scale events, such as university football games, it not uncommon for cellular towers to be overwhelmed, compromising communications. How will campuses react and support emergency communications during a disaster? Will they have sufficient infrastructure to have reliable and redundant emergency communications? Institutions of higher education can experience mass casualty incidents, whether from terrorism, disasters, pandemic flu, or acts of unstable individuals.

Leaders of colleges and universities need to be trained and prepared to give crisis communications. They should have campus emergency communications teams in place to facilitate planning and preparation.

Emergency managers, information technologists, and administrators at college and university campuses must effectively cooperate with each other and community emergency responders to enhance the effectiveness of campus emergency notifications. Communications interoperability – is the key component of intra- and inter-organizational emergency communications. How will your communications systems work with other communications systems?

Campus Public Emergency Communication Project

- Competitive Training Grant funded by the U.S. Department of Homeland Security, FEMA
- Purpose :
 - Campus public emergency communications best practices
 - Three NIMS-compliant, online modular training courses on effective campus public emergency communications



Classes cancelled due to snowfall at Indiana University of Pennsylvania, Indiana Pennsylvania . February 2010
<http://www.iup.edu/page.aspx?id=91985>
Photos: Keith Boyer



This research was made possible by a Competitive Training Grant funded by the U.S. Department of Homeland Security, FEMA

Its purpose is to identify best practices related to campus public emergency communications and to develop, prepare and distribute a series of three NIMS-compliant, secure, online modular training courses on effective campus public emergency communications.

These courses will identify the methods used during an emergency by campuses to communicate with faculty, staff, students, and the neighboring community. To facilitate standardization of communications modes and sharing of best practices.

Research Methodology

- Surveys, interviews & lit. review
- Research subject training
 - ASU Institutional Review Board
 - National Institutes of Health
- Cross section of U.S. four year colleges and universities
- Contact Database
 - 2009 College Board College Handbook
 - Disaster Resilient University (DRU)
 - Personal relationships



A variety of research methods were used during the development of these courses. Surveys, interviews, and a literature review were conducted to develop the training courses. The CPEC Instructional Design Team follow research standards established by ASU. ASU has an Institutional Review Board (IRB) to ensure compliance with human subjects research as defined by the National Institutes of Health (NIH). Efforts were made to contact a broad cross section of U.S. four year colleges and universities. The sample was geographically balanced with campus throughout the U.S. Both privately and publically funded campuses were contacted. Population density was also considered with campuses contacted in both urban and rural areas. For the initial data gathering 2009 College Board College Handbook, Disaster Resilient University (DRU) listserv member list, and personal relationships were used to establish a research contacts database. This database was used to solicit participation in one of several information gathering methods. Protocols were established to ensure confidentiality and to reduce bias in the results.

Information Gathering

- Surveys
 - Survey Monkey
 - 1755 U.S. four year colleges and universities
 - 1397 participating in two research surveys
 - Emergency Communications Systems and Practices
 - ENS: Their Redundancies and Backups

- Interviews
 - 66 audio or video recorded interviews



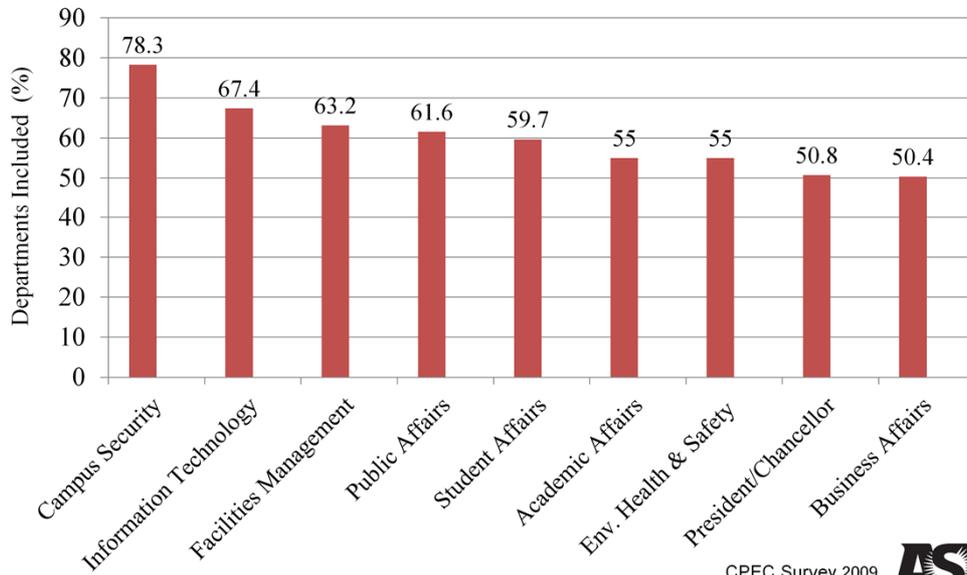
The research team used two survey methods to gather information.

On-line surveys were hosted by Survey Monkey.

The research team solicited 1755 U.S. four year colleges and universities resulting in 1397 colleges and universities participating in two research surveys. The survey was directed at campus emergency managers, campus public safety, and campus police. The first survey researched "Emergency Communications Systems and Practices" and the second looked into "ENS: Their Redundancies and Backups."

The team also conducted face-to-face audio or video-recorded interviews of campus emergency managers, campus safety, police, fire, EMS, public health, and mental illness professionals. The interviews documented the knowledge base of campus emergency managers about the strengths and weaknesses of emergency communications systems. Other interviews recorded the perspectives of police, fire, EMS, public health and mental illness experts, on emergency communications with campuses before, during, and after an emergency and how communications between local first responders and campuses could be improved.

Participants in Emergency Communications Teams

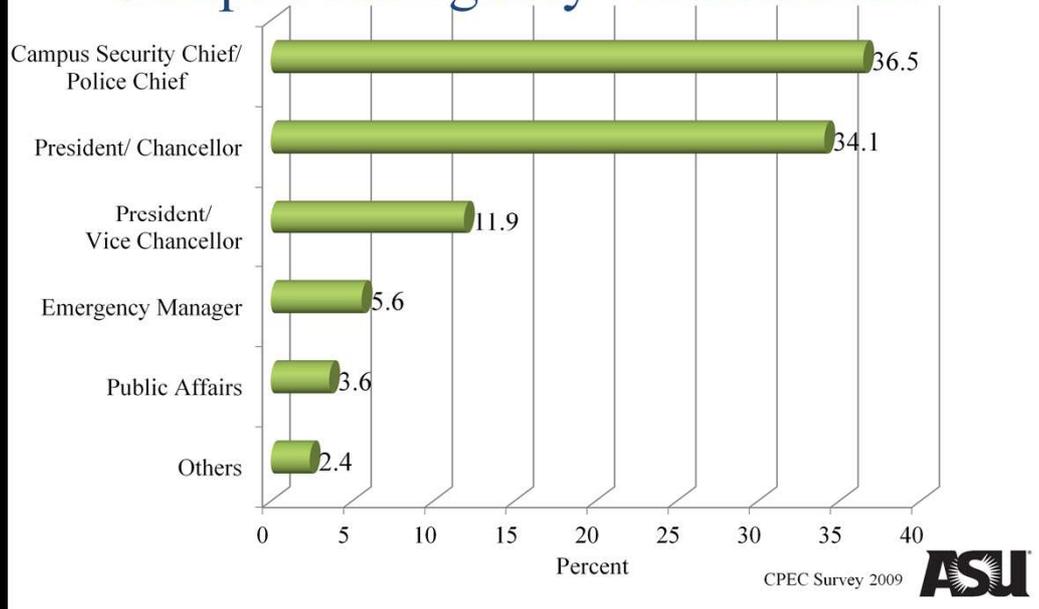


CPEC Survey 2009



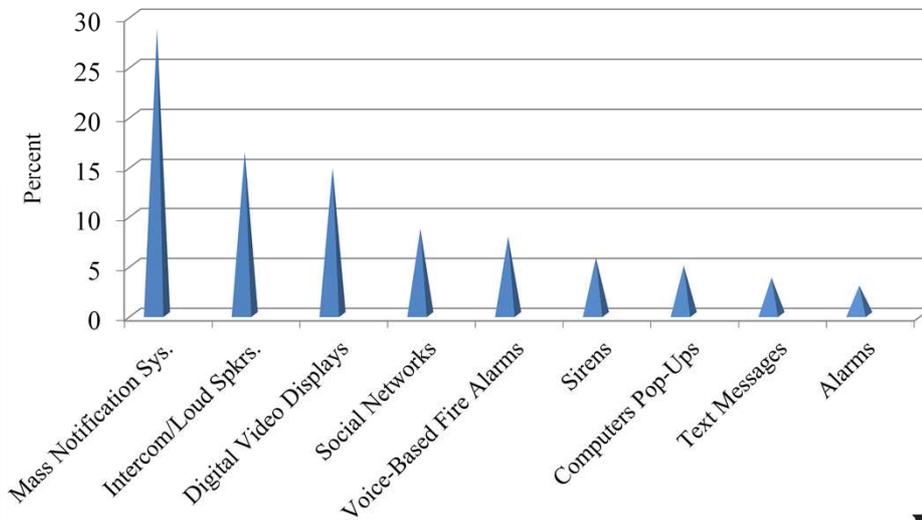
The survey question asked, "Which organizations have representatives on campus emergency communications team on your campus?" Please choose all that apply. The survey provided multiple selection options. The top nine responses are shown in this slide.

Authorized to Initiate Campus Emergency Notifications



The survey question asked, “Who on your campus decides to send out an emergency notification message?” A list of choices was provided. The respondent could select a primary, secondary, and tertiary representative who was authorized to initiate a campus emergency notification. The top six responses are displayed.

Systems Considered For Further Development

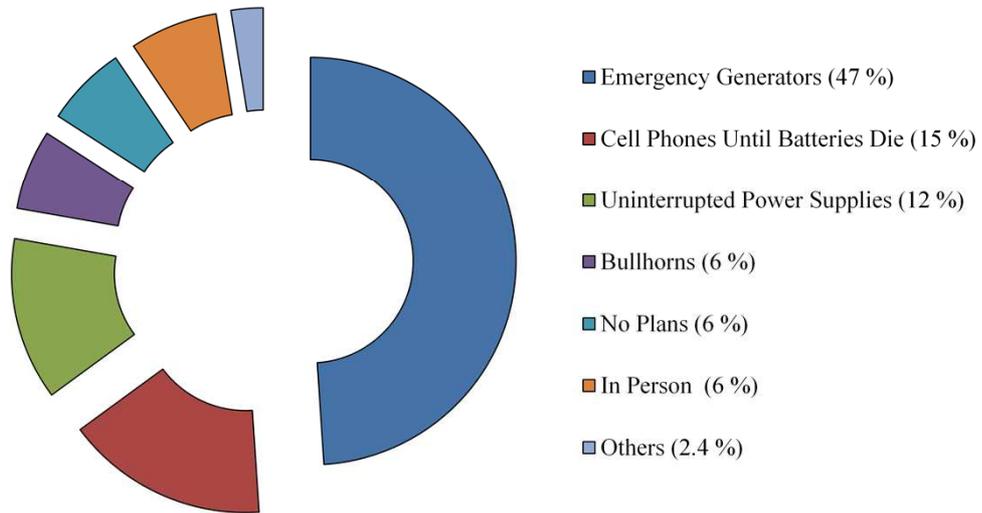


CPEC Survey 2009



The survey question asked, “Of the following emergency communications systems, which three are you most interested in further developing in the next two years?” A list of choices was provided. The respondent could select a primary, secondary, and tertiary representative who was authorized to initiate a campus emergency notification. The top nine responses are provided.

Backup Systems in Existing Emergency Communications Plans



CPEC Survey 2009



The survey question asked, “What backup system(s) does your existing emergency communications plan call for should electricity fail?” The respondent could choose primary, secondary, and tertiary backup methods. Only the primary methods are reported here.

Conclusions

- 60% multi-modal ENS
- 45% indicated 75-100% audience reached
- 99% of audience reached with use of multi-modal ENS



<http://www.duprofessionaled.com/index.php/2012/02/severe-weather-closes-du/>



The recent Arizona State University survey of campus emergency communicators showed that about 60% of U.S. campuses used a commercial multi-modal emergency notification system (ENS). ENS continues to improve and change with new technologies. They are becoming better able to send out quickly large numbers of messages. Dave Bujak at Florida State University has had great success with multi-modes for emergency communications. <http://www.campussafetymagazine.com/Channel/Mass-Notification/Articles/Print/Story/2012/03/Florida-State-s-Easy-Button1.aspx> Only 45% of survey respondents indicated confidence that 75-100% of the intended audience was reached during a recent test. From a 2010 survey, it was learned that 99% of the intended audience was reached using multi-modal ENS. A Maricopa county, Arizona training exercise used commercial multi-modal ENS (pre-scripted alert messages were prepared and deployed using voice, text, email, pager, and fax) as its emergency notification protocol. The ENS reached 99% of its intended audience. Using multiple systems bypassed limited telecommunications throughput capacity of a single system. Though this is an intuitive assumption that using multiple modes offers a higher success rate, it is important to support the assumption with viable research data.

Findings, Results and Best Practices

- Campus emergency managers need a better understanding of their role in emergency notification systems on campus
- Collaboration between IT and campus administrators during the research, design, and implementation of an effective campus ENS was not measured
- Emergency managers need be familiar with the IT strengths and weaknesses of their emergency notification systems

Analysis of both Arizona State University surveys shows there is an educational need for emergency managers at four-year colleges or universities in the United States to have a better understanding of their role with respect to the emergency notification systems on campus.

A need exists for measuring the extent of collaboration with IT, and college or university administrators in the research, design, and implementation of effective campus emergency notification systems (ENS).

Some emergency managers do not know the IT strengths and weaknesses of their emergency notification systems, and how they can be improved.

Too many campus emergency managers (EMs) are not familiar with the inner workings of IT. There were large percentages (over 60% in some cases) of the EMs surveyed who did not have information about

- The frequency of outside network security,
- If an external network security audit was performed,
- How often anti-virus software and agents were updated,
- What are the SOPs for backups of campus emergency communications systems or data? 51%
- How often the integrity of backups-tested by test resort- was tested 81%
- How often backups are performed
- Where the backups are stored 37%
- If there is duplicate hardware and software offsite in case of primary site backup system failure 44.6
- If there is a backup or redundant emergency mass notification system 23%
- Knowledge of how long VOIP system would stay up with power loss 67%

The Courses

- To provide instruction and best practices in campus communications before, during and after emergencies
- Courses are asynchronous and include text, voice, video, and references
- Internet access allows flexible scheduling



A series of three full-length, modular multimedia courses will be developed and distributed on the subject of Campus Public Emergency Communications. Communications during campus emergencies can save property from extensive damage. Communicators can clear up misinformation or create confusion. Communication can mean the difference between life and death. The purpose of this project is to provide instruction and best practices in campus communications before, during and after emergencies. Formats of courses with asynchronous access will include blended media such as voice, video and narrations providing for flexibility and versatility in scheduling and geographic access.

Campus Public Emergency Communications Courses

Course A

Campus Public Emergency Communications:
Principles of Effective Campus Public
Emergency Communications

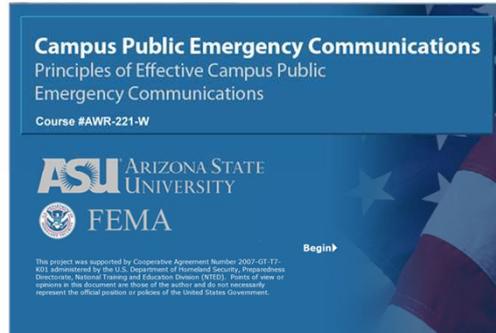
Course B

Campus Emergency Communications:
Individual and Organizational Perspectives

Course C

Emergency Communications Systems: Best
Practices and Emerging Trends

Campus Public Emergency Communications
Website <http://cpec.technology.asu.edu/>



The first course identifies that each campus is unique and how they communicate is unique. Course A identifies the trends in campus public emergency communications how campuses communicate with faculty, staff and during an emergency. Course B (integration with the community) It looks at the perspectives of local emergency response personnel, police, fire, EMS, behavioral health, and how they communicate with campuses and how they would like campuses to communicate with them. It also talks about pandemic preparation, the use of volunteers and training available. Course C discusses the hardware and communication systems that should be considered as part of campus public emergency communications planning.

Module 2: NIMS and ICS Concepts for Campus Communicators

Homeland Security

Lesson 6: Challenges To Incorporating NIMS/ICS

Resources Glossary Help Exit

Lesson 6: Challenges To Incorporating NIMS/ICS

Challenges with Implementing NIMS/ICS in a Campus Setting

Colleges and universities are an integral part of the community, and ideally they coordinate fully with NIMS/ICS organizations within their community and in larger jurisdictions. Adoption and exercise of NIMS/ICS will generally facilitate this process. Each campus is unique, and institutional characteristics may pose a variety of challenges when adopting NIMS/ICS. Some of these are:

- Traditionally ways of addressing incidents not consistent with NIMS/ICS may be deeply rooted in practice and difficult to change.
- A campus culture of minimizing structured command and control tends to complicate NIMS/ICS adoption.
- The philosophy of academic freedom fosters individuality, which complicates adopting directed emergency response philosophies.
- Personnel who serve for a long time at colleges and universities tend to resist organizational change.
- When administrators perceive crises or emergencies as being relatively rare, they may deem emergency management as being of less importance to develop and maintain – in actuality, crises and emergencies of some kind or another may be relatively common.



An example of a course lesson screen

Course A: Campus Public Emergency Communications: Principles of Effective Campus Public Emergency Communications

Module 2: Planning for Campus Emergency Communications

Lesson 6: Challenges to Incorporating NIMS/ICS

This lesson includes an embedded video “Best Emergency Planning”

Each lesson is narrated many include video. Each screen includes links for resources, and course glossary.

Each course has a Pretest and Posttest and each module has a Check Your Knowledge quiz.

Homeland Security | Module 3: Planning for Campus Emergency Communications

Lesson 1: Campus Emergency Communications | Resources | Glossary | Help | Exit

Overall Goals of Campus Emergency Communications

When planning for emergency communications, consider your overall goals. You will have two types of emergency communications: (1) internal and (2) external. Internal emergency communications are between groups involved in incident command, e.g., campus administrators, and emergency managers and responders. External emergency communications are with the public.

"The goal is to get the right information to the right people at the right time."
Department of Homeland Security

Plan on sharing non-sensitive information quickly with all stakeholders who may need it, including on- and off-campus public. Relative to communicating with them,

"Be first. Be right. Be credible."
Centers for Disease Control

If you do this, then the public may come to trust you as a good source of emergency information.

Of course, some information is classified, or "need to know" only. Do not permit its access by unauthorized individuals. Take steps to prevent and report any inappropriate disclosure.



An example of a course lesson screen

Course A: Campus Public Emergency Communications: Principles of Effective Campus Public Emergency Communications

Module 3: Planning for Campus Emergency Communications

Lesson 1: Campus Emergency Communications

Each lesson is narrated many include video. Each screen includes links for resources, and course glossary.

Each course has a Pretest and Posttest and each module has a Check Your Knowledge quiz.



Campus Emergency Communications Team



Develop a campus team to plan for and coordinate emergency communications. Team members may include some or all members of an incident, emergency or risk management team along with others potentially involved in campus communications. The emergency communications plan may be a subset of the overall emergency operations plan. The team members

- seek emergency communications that will do the greatest amount of good for the greatest number of people on campus and protect life, health, property and freedom, considering particularly those with special needs
- meet regularly and develop, review, and revise emergency communication plans as needed, seeking to build campus communications capacity over time while realistically considering the resources and capabilities of the campus
- document the planning process in a living, written document or plan available to all team members
- develop annexes to the plan providing references and operational details (these may be available for use only by certain groups, e.g., campus police)



["Best Emergency Planning"](#)



An example of a course lesson screen

Course A: Campus Public Emergency Communications: Principles of Effective Campus Public Emergency Communications

Module 3: Planning for Campus Emergency Communications

Lesson 1: The Campus Emergency Communications Team

This lesson includes an embedded video "Best Emergency Planning"

Each lesson is narrated many include video. Each screen includes links for resources, and course glossary.

Each course has a Pretest and Posttest and each module has a Check Your Knowledge quiz.

Best Practices in Campus Public Emergency Communications

- Be in tune with new trends in emergency communications
- Identify and partner with the campus community
- Be transparent, share information
- Use campus emergency management or campus law enforcement offices to initiate emergency notifications



Be in tune with new trends in emergency communications

Emerging Trends in Social Media – Be familiar with and evaluate the emerging trends in emergency communications, social media is becoming an increasingly viable method of communicating with the campus public.

Every student with a cell phone and a Facebook page is reporter; their information is duplicated and repeated. It is important for Universities to be adept and swift to get their message out to the community so that it is the university's message that is being duplicated and repeated. If the campus does not get the message out fast, then someone else will.

Modern technology can connect people all over the nation and the world. At the same time, it may enable two-way communications between the public and emergency managers on campus.

Identify and involve your campus community

A college or university is a community that includes many stakeholders. Depending on the incident or emergency, it may be necessary for public information officers and other campus communicators to share information with varied audiences, which may involve the following individuals:

On-Campus Public: students, faculty, staff, administrators, and visitors

Off-Campus Public: parents of students, community residents, businesses and organizations

Be transparent, Share information

During a campus emergency, the public needs to know what is happening, how it may affect them, what actions they can take in response, and what campus officials are doing about the emergency. Such communications can help save lives and property. Research shows that sharing information is *not likely to cause panic*.

Use and share only credible and reliable information about public health issues.

Use Emergency Management or Campus Law Enforcement to initiate emergency notifications

Campus executive level administrators should allow the designated campus emergency manager (often the police chief) the autonomy to push out the initial emergency notice and urgent follow up notices independent of campus administration during a crisis.

Upper management should support the delegated emergency communications process and personnel.

Best Practices in Campus Public Emergency Communications

- Include stakeholders in training and exercising
- Coordinate communications and messaging
- Interoperability in every tier of campus communications
- Redundancy: multiple tools in the emergency communications tool box



Invite all stakeholders to training classes and exercises (administration, campus, community)
Drill, practice and exercise together
Faculty and staff should receive basic emergency management training and learn how to identify and respond to a troubled person that might cause harm to others. Faculty must know that they can and should report students that exhibit threatening behavior.

Coordinate communications and messaging

Use a “One Voice – One Message” approach to communicating public emergency information. Coordination of emergency communications can help prevent confusion or a perception of lack of candor when messages from one organization do not match those of another.

Use pre-scripted messages that can be quickly used during an emergency.

Interoperability should be included at every tier of campus communications

Establish communications interoperability so that local law enforcement and campus security can have direct communications.

Interoperable communications includes all communications methods face-to-face, radio, telephone, text messaging and email. A unified command post and use of common terminology sets the stage for good multi-agency communications during an incident.

Have multiple tools in the emergency communications toolbox

Emergency managers/responders must guard against the development of an attitude of complacency or over confidence, which may be more likely after an organization invests a significant sum of money in new technology and communications equipment.

Multi-modal ENS – continually evaluate the effectiveness of your multi-modal communications systems.

Best Practices in Campus Public Emergency Communications

- Establish and use emergency communications planning teams
- “If it’s predictable, it’s preventable”: Plan with an all-hazards mindset
- NIMS/ICS: A minimum standard
- Include communications protocols in your mutual aid agreements



Emergency communications planning teams

Utilize fire personnel during the planning phase of construction projects to prevent “built-in” hazards and ensure access for emergency vehicles. Utilize radio experts to assess communications limitations and recommend improvements. Develop a campus team to plan for and coordinate emergency communications.

Preparing for disease outbreak communications necessitates the establishment of relationships with the local health department and many other stakeholders. Campuses should consider leading or being a member of a community-wide group dedicated to pandemic influenza planning.

Include a diverse list of stakeholders including mental illness experts, on your planning team.

If it’s predictable, it’s preventable – Planning with an all-hazards mindset.

Planning is the key to successful communications. “If it’s predictable, it’s preventable.

Have solid contingency planning, include provisions for special needs populations such as TTY for phone notifications and screen readers for web-based notification.

Communications regarding mental health needs to be included in all campus emergency operations plans. Ensuring that behavioral health communication is addressed at every stage of the emergency management cycle. Mental and behavioral health specialists have a critical role as communicators before and after an emergency.

Establish a strong pandemic management plan, which includes communications about prevention.

NIMS/ICS

Integrate NIMS/ICS into emergency management preparation. Consider utilizing a Unified Command on Game day. Bob Armstrong, Director Emergency Management and Fire Protection, The Ohio State University, Ohio Video “Unified Command on Game day” 0102071.flv

Coordination of emergency communications

Consider partial activation of a campus EOC during large events on campus – reducing response time.

Continually update fire, police, emergency responders about unique campus hazards such as laboratories. Invite response personnel to identify and assess possible locations of communications blockage.

Campus should keep neighboring law enforcement informed of incidents that may spill over into an adjoining jurisdiction. It will facilitate response and communication.

Campus EMs should educate campus leaders on how the campus communicates with off-campus agencies during incidents. Campus EMs should seek resources to eliminate communications deficiencies.

Avoid “Making Friends in a Foxhole” by developing relationships with community emergency agencies prior to an emergency. Use social events and training exercises to establish relationships.

Identify roles and responsibilities for communications when updating mutual aid agreements with local emergency responders.

Best Practices in Campus Public Emergency Communications

- Use ENS only for emergency notifications
- Arrange in advance compatible, accessible protocols, systems and networks
- Consider amateur radio as a backup technology
- Prevention oriented communications will mitigate consequences of disasters



Use ENS only for emergency notifications.

Too many messages weakens the system and recipients begin to ignore messages.

Arrange in advance compatible, accessible protocols, systems and networks.

Communications operability is the key to successful emergency communications.

Consider amateur radio as a backup technology

When the power is out amateur radio is still going strong. During planning, training and exercising, involve licensed amateur radio enthusiasts - they provide a valuable service and can supplement multi-modal communication methods.

Prevention: an underlying mindset for all emergency managers. An example is providing high awareness of suicide prevention services through communications approaches targeting the whole community.

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Arizona State University Police Dept.	Illinois Police Dept., University of Illinois	Pullman Police Dept.	University of Idaho
Boise State University	Iowa City Fire Dept.	Rio Rico Fire District	University of Illinois
Brigham Young University	Kent State University	San Francisco Police Dept.	University of Iowa
Brigham Young University Police Dept.	Latah County Public Health Dept.	Spokane County Public Health Dept.	University of Louisville
Case Western Reserve University	Louisiana State University	Spokane Fire Dept.	University of Mass. at Boston
Central District Idaho Public Health Dept.	Maricopa County Dept. of Emergency Mgmt.	Spokane Police Dept.	University of Missouri
Champaign-Urbana Public Health District	Massachusetts Institute of Technology	Stanford University	University of New Hampshire
City of Berkley Police Dept.	Melbourne Florida Fire Dept.	Stillwater Fire Dept.	University of San Francisco
City of Boise Fire Dept.	Missouri Fire Dept.	Tempe Fire Dept.	University of South Maine
City of Chicago Dept. of Public Health	Moscow Fire Dept.	The Ohio State University	University of Southern Alabama
Davis Police Dept.	Moscow Police Dept.	The State University of New York (SUNY)	Urbana Police Dept.
DeKalb County Health Dept.	Natl. Weather Service Florida State University	Tulane University	Whitman County Public Health Dept.
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